

# **Utah Vital Statistics: Quarterly Report**

## **First Quarter 2003**



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## Mission Statement

The Office of Vital Records and Statistics administers the statewide system of Vital Records and Statistics by documenting and certifying the facts of births, deaths, and family formation for the legal purposes of the citizens of Utah, participates in the National Vital Statistics System, and responds to the needs of health programs, health care providers, businesses, researchers, educational institutions and the Utah public for data and statistical information.

## Source of Data

Vital statistics birth and death certificates are required by law to be filed with the state Office of Vital Records and Statistics and are the primary source of data presented in this report. These birth and death data are provisional until published in the annual report, Utah's Vital Statistics: Births and Deaths (Year).

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2003 1st Quarter Overview

Births, deaths, infant deaths, stillbirths, and population by health district: Utah 2003  
(1st quarter)

Health district County	Population Number	Births	Deaths	Infant deaths	Stillbirths
		1st Qtr Number	1st Qtr Number	1st Qtr Number	1st Qtr Number
Total	2,338,762	11,851	3,277	56	52
Bear River	141,322	787	195	3	4
Box Elder	43,812	183	76	3	1
Cache	95,460	600	117	0	3
Rich	2,050	4	2	0	0
Central Utah	67,673	272	139	1	2
Juab	8,643	50	11	0	0
Millard	12,335	45	25	0	0
Piute	1,409	4	3	0	0
Sanpete	23,550	92	46	0	2
Sevier	19,232	73	46	1	0
Wayne	2,504	8	8	0	0
Davis	250,265	1,277	335	5	5
Salt Lake	927,564	4,313	1,293	20	25
Southeastern	53,082	185	102	3	1
Carbon	19,858	71	48	1	1
Emery	10,540	42	19	0	0
Grand	8,468	25	14	0	0
San Juan	14,216	47	21	2	0
Southwest	152,960	742	260	4	3
Beaver	6,285	34	11	0	0
Garfield	4,599	17	9	1	0
Iron	35,507	165	58	1	0
Kane	5,958	16	5	0	0
Washington	100,611	510	177	2	3
Summit	32,236	135	29	0	0
Tooele	46,208	268	62	2	0
Tri-County	41,756	199	93	1	1
Daggett	916	6	1	0	0
Duchesne	14,856	84	41	0	0
Uintah	25,984	109	51	1	1
Utah County	398,056	2,584	430	9	8
Wasatch	16,847	88	14	0	0
Weber-Morgan	210,793	1,001	325	8	5
Morgan	7,416	32	15	0	0
Weber	203,377	969	310	8	5

2003 1st Quarter Overview

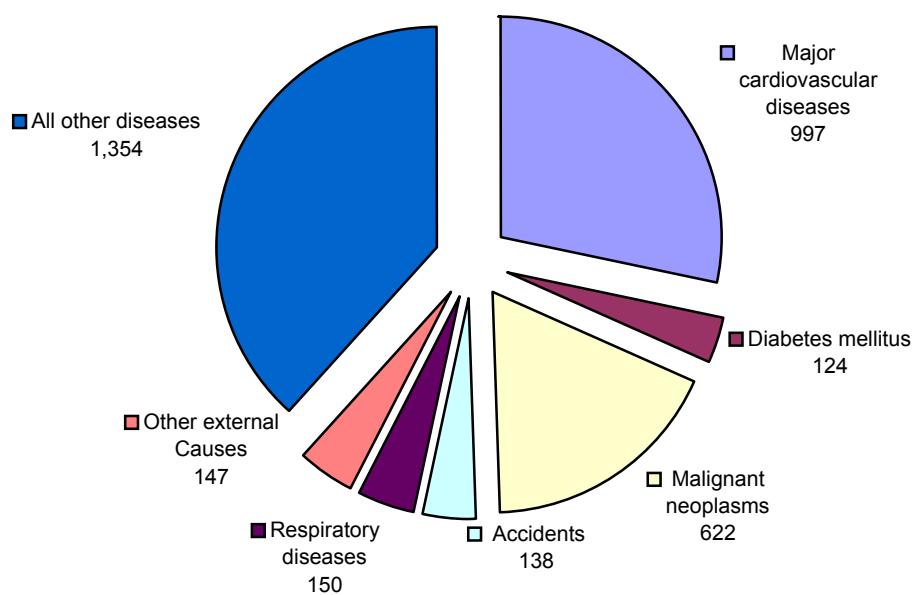
Births, c-sections, gestation under 37 weeks, mothers under 20 years of age, and low birthweight by county of residence: Utah 2003 (1st quarter)

Health district County	Births	C-sections	Gestation under 37 weeks	Mothers under 20 years of age	Low birth weight
	1st Qtr Number	1st Qtr Number	1st Qtr Number	1st Qtr Number	1st Qtr Number
Total	11,851	2,276	1,074	814	742
Bear River	787	125	60	58	44
Box Elder	183	30	3	18	6
Cache	600	95	57	40	37
Rich	4	0	0	0	1
Central Utah	272	62	31	27	23
Juab	50	6	6	4	8
Millard	45	17	5	4	5
Piute	4	1	0	1	0
Sanpete	92	18	13	11	4
Sevier	73	17	5	7	5
Wayne	8	3	2	0	1
Davis	1,277	250	121	80	80
Salt Lake	4,313	869	395	318	276
Southeastern	185	41	20	20	17
Carbon	71	14	8	7	6
Emery	42	10	6	5	5
Grand	25	4	1	2	1
San Juan	47	13	5	6	5
Southwest	742	103	73	61	37
Beaver	34	10	4	3	3
Garfield	17	1	2	0	2
Iron	165	22	17	14	12
Kane	16	2	1	4	0
Washington	510	68	49	40	20
Summit	135	27	14	11	15
Tooele	268	58	28	19	22
Tri-County	199	40	15	32	12
Daggett	6	2	0	0	0
Duchesne	84	19	7	11	6
Uintah	109	19	8	21	6
Utah County	2,584	444	206	96	134
Wasatch	88	16	3	5	3
Weber-Morgan	1,001	241	108	87	79
Morgan	32	8	8	1	3
Weber	969	233	100	86	76

## Deaths due to unnatural causes by county of residence: Utah 2003 (1st quarter)

Health district County	Deaths	Total	Motor vehicle	Other accidents	Homocide	Suicide	Undetermined
	1st Qtr Number	1st Qtr Number	1st Qtr Number	1st Qtr Number	1st Qtr Number	1st Qtr Number	1st Qtr Number
Total	3,277	285	47	91	12	84	51
Bear River	195	16	5	4	0	6	1
Box Elder	76	11	2	3	0	5	1
Cache	117	5	3	1	0	1	0
Rich	2	0	0	0	0	0	0
Central Utah	139	17	3	7	0	7	0
Juab	11	1	0	1	0	0	0
Millard	25	4	1	2	0	1	0
Piute	3	0	0	0	0	0	0
Sanpete	46	7	2	3	0	2	0
Sevier	46	5	0	1	0	4	0
Wayne	8	0	0	0	0	0	0
Davis	335	22	5	6	1	5	5
Salt Lake	1,293	118	12	36	8	39	23
Southeastern	102	9	2	2	0	4	1
Carbon	48	3	0	0	0	3	0
Emery	19	3	1	0	0	1	1
Grand	14	1	0	1	0	0	0
San Juan	21	2	1	1	0	0	0
Southwest	260	18	1	7	1	3	6
Beaver	11	1	0	0	0	0	1
Garfield	9	1	0	0	1	0	0
Iron	58	2	0	1	0	0	1
Kane	5	1	0	0	0	0	1
Washington	177	13	1	6	0	3	3
Summit	29	4	1	1	0	1	1
Tooele	62	3	1	1	0	1	0
Tri-County	93	11	2	4	0	1	4
Daggett	1	0	0	0	0	0	0
Duchesne	41	5	1	2	0	1	1
Uintah	51	6	1	2	0	0	3
Utah	430	39	10	11	1	11	6
Wasatch	14	2	0	2	0	0	0
Weber-Morgan	325	26	5	10	1	6	4
Morgan	15	3	1	2	0	0	0
Weber	310	23	4	8	1	6	4

## Leading Causes of Death 2003 1st Quarter





## **Utah Vital Statistics: A Historical Review**

*Utah Vital Statistics: A Historical Review presents an overview of selected public health trends in Utah using data derived from Utah birth and death certificates. These data may be available for approved research projects. For more information or to request data, please contact the Utah Office of Vital Records and Statistics.*

### **Utah Deaths, 1960-2000**

Researchers can learn much about a given population and the impact of health care programs by analyzing death data over time. Vital Records has statistical death databases dating back to 1956. Table 1 shows that the number of deaths in Utah has more than doubled since 1960 and so has the state's population. The raw data, although interesting, are not a measurement of mortality and cannot be used to compare the changing population over time. Rates are often calculated to provide comparative data.

Table 1

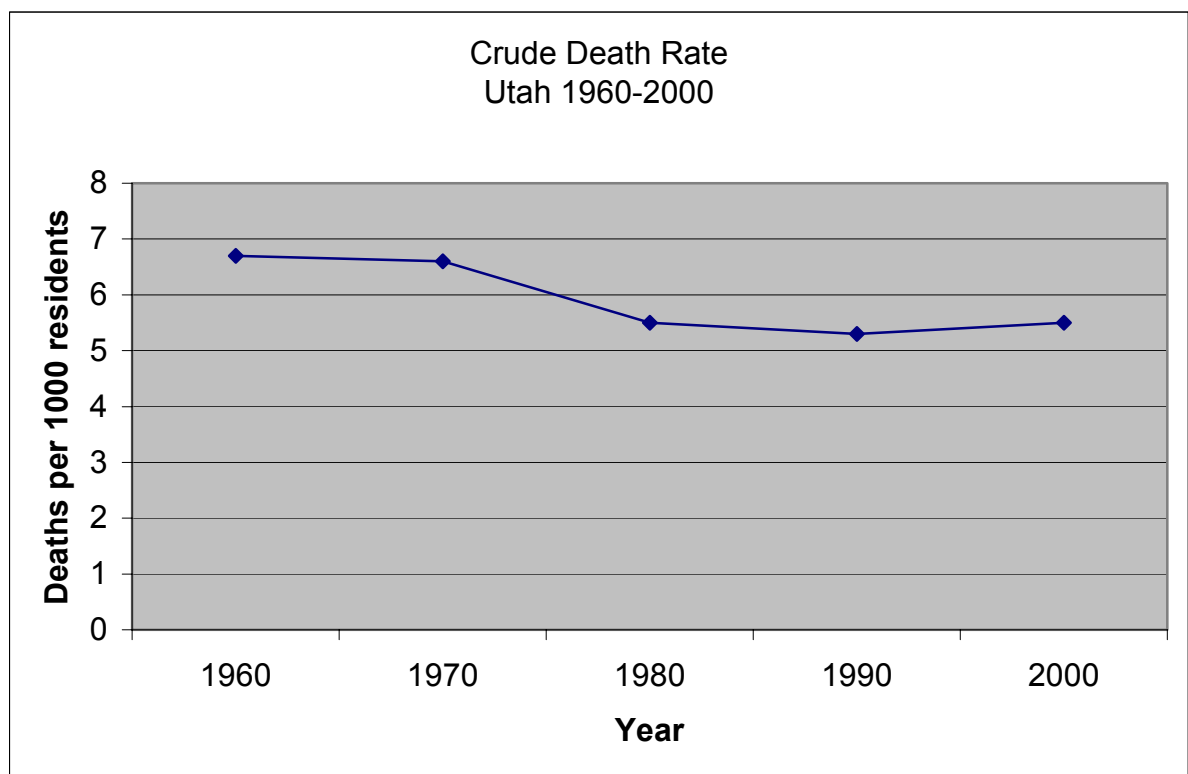
#### **Utah Population and Death Counts 1960-2000**

<b><u>Year</u></b>	<b><u>1960</u></b>	<b><u>1970</u></b>	<b><u>1980</u></b>	<b><u>1990</u></b>	<b><u>2000</u></b>
<b><u>Number of deaths</u></b>	6,006	7,073	8,103	9,125	12,340
<b><u>Population</u></b>	90,0000	1,099,000	1,474,000	1,729,277	2,246,554

## Crude Death Rates

The crude death rate, the number of deaths per 1000 residents, is one method used to measure mortality. Figure 1 illustrates that the crude death rate in Utah has steadily decreased from 1960 to 1980. The crude death rate has been fairly constant from 1980 to 2000. The decline in the crude death rate, in spite of the increase in population, infers an improvement in the overall health of the people in Utah. Small changes in the crude rate can be attributed to changes in the underlying population.

Figure 1



## Changing Population

The crude death rate does not account for changes in the population such as age, race or gender. A population with a higher percentage of older residents will almost always have a higher crude death rate compared to areas with a younger population. Figures 2 and 3 are population pyramids that show the breakdown by age of Utah's population for the years 1980 and 2000. The shape of the pyramids shows Utah's population is both growing and changing. In Figure 2, the wider bars at the bottom of the graph depict a younger population in 1980 than the graph in Figure 3 for 2000.

Figure 2

Age Distribution by Year, 1980

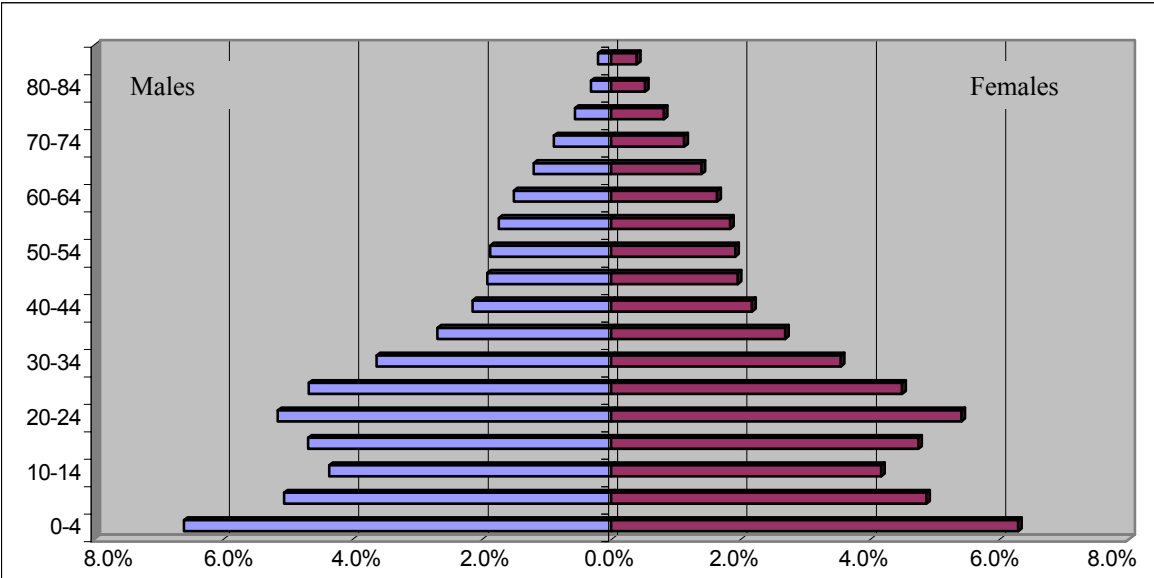
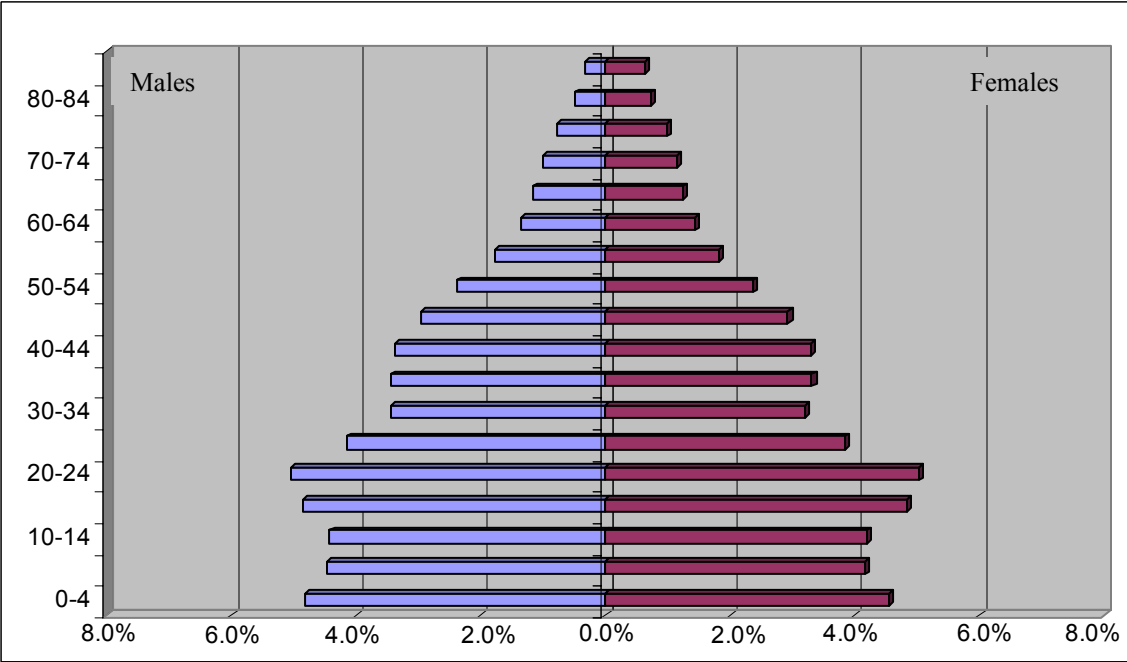


Figure 3

Age Distribution by Year, 2000



## Age-Specific Death Rates

Age-Specific Death Rates (ASDR) are used to compare mortality of specific age groups. Table 2 shows ASDR in five year intervals for the years 1980, 1990 and 2000. In 1980 the ASDR is high for infants less than one year of age, 10.4 deaths per 1000 residents, but falls to 5.5 in 2000. The rates for ages 30-54 are flat between 1990 and 2000. Most of the reduction in overall mortality has been made from people 55 or older living longer. This has major implications for planning for health, social, and workforce resources.

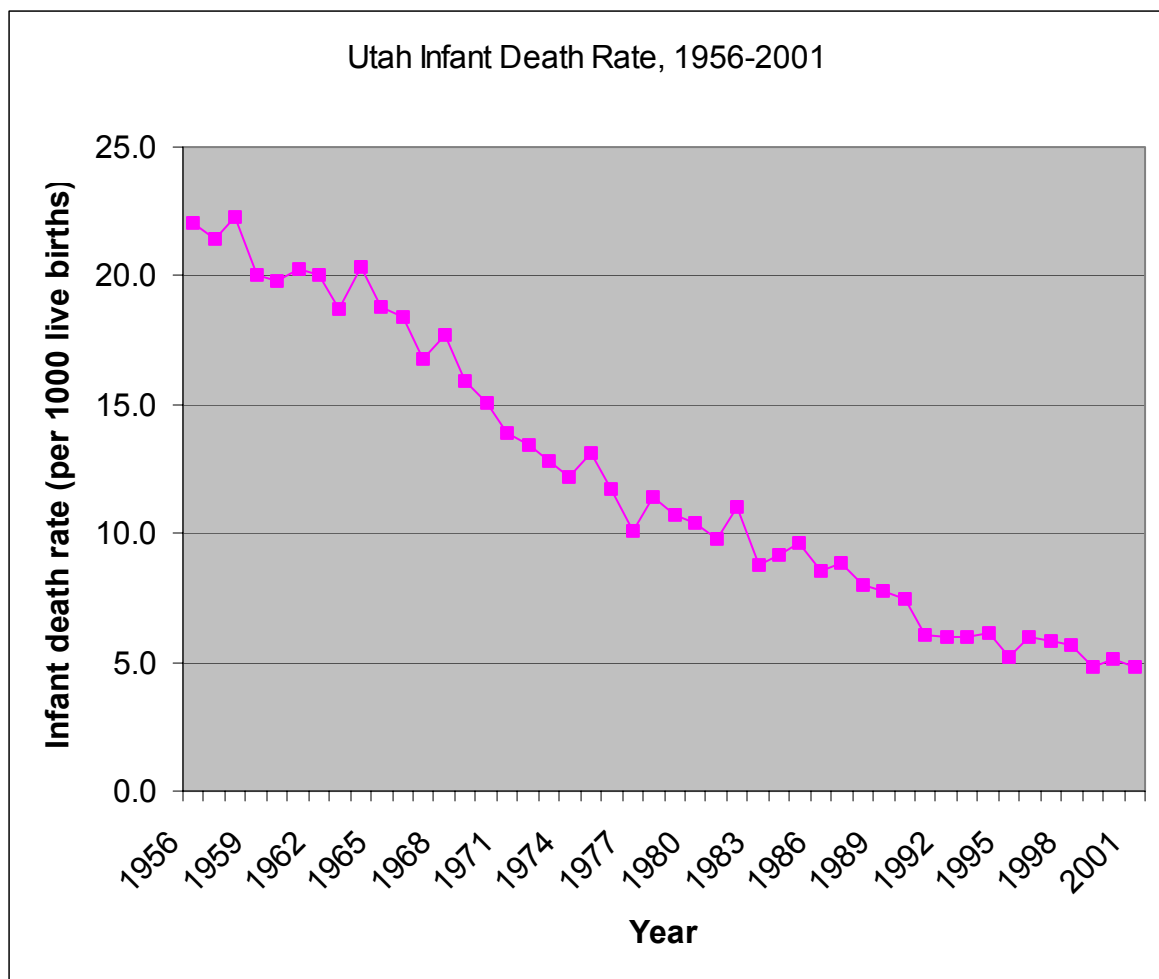
Table 2  
Age Specific Death Rates  
Deaths per 1000 residents

Age group	Year		
	1980	1990	2000
<b>0</b>	10.4	7.6	5.5
<b>1-4</b>	0.7	0.4	0.3
<b>5-9</b>	0.3	0.2	0.1
<b>10-14</b>	0.3	0.2	0.2
<b>15-19</b>	0.9	0.8	0.6
<b>20-24</b>	1.0	0.8	0.7
<b>25-29</b>	1.0	0.8	0.7
<b>30-34</b>	1.1	1.1	1.1
<b>35-39</b>	1.4	1.5	1.6
<b>40-44</b>	2.3	1.9	1.9
<b>45-49</b>	3.5	2.7	2.7
<b>50-54</b>	5.7	4.0	4.0
<b>55-59</b>	8.3	6.9	6.2
<b>60-64</b>	12.7	10.4	9.7
<b>65-69</b>	20.5	15.9	15.0
<b>70-74</b>	30.2	25.7	24.6
<b>75-79</b>	50.0	44.2	41.3
<b>80-84</b>	84.9	70.9	73.1
<b>85+</b>	91.2	87.8	94.0

## Infant Death Rate

Age-Specific Death Rates show which age groups have higher mortality and warrant a more in depth analysis. Table 1 shows significant decreases in ASDR for infants less than one year of age and for those 55 or older. Figure 4 is a graph of the crude death rate for infants less than one year of age since 1956 and shows a steep decline in infant deaths. Since 1956, many programs and interventions have been designed to decrease the mortality of infants.

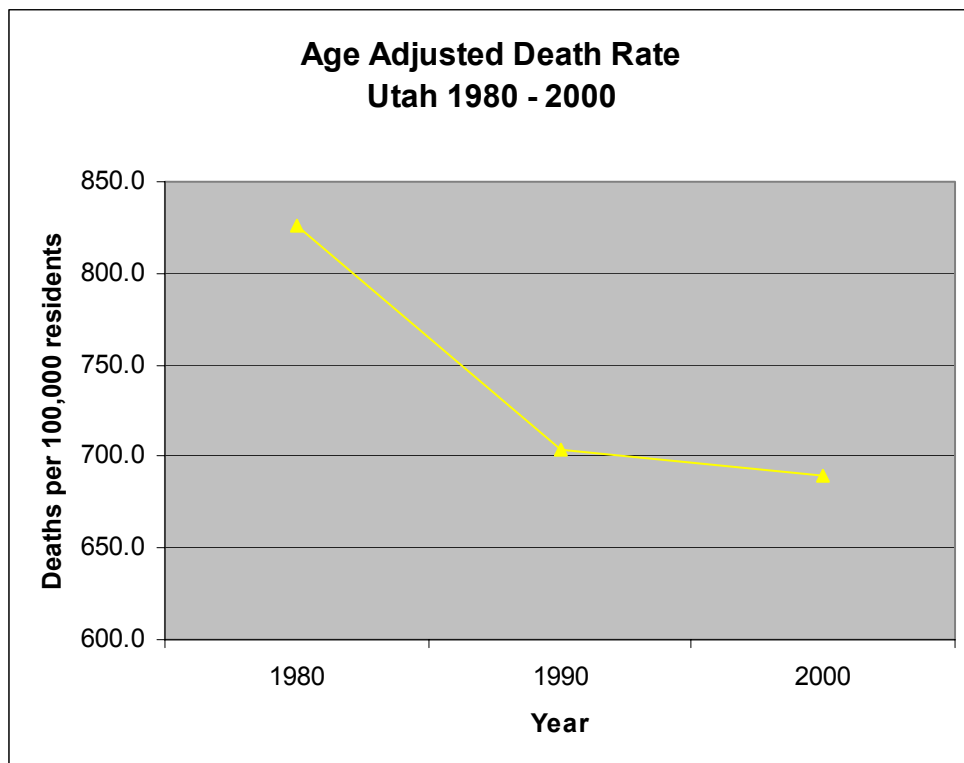
Figure 4



## Age Adjusted Death Rate

Age-adjusted death rates are measures used to compare rates over time or between different geographic areas. Age-adjusted death rates eliminate the bias of age in the populations being compared, thereby providing a much more useful measure of mortality for comparison purposes. The age-specific death rates of the population of interest are applied to the age distribution of a “standard” population in order to calculate “expected deaths”. These expected deaths for each age group are then summed and divided by the total standard population to arrive at the age-adjusted death rate. The age-adjusted death rate is the death rate the population would have if it had the same age distribution as the standard population. It is an artificial number and is only used for making comparisons between time periods or geographic areas. The actual numeric value of an age-adjusted rate is dependent on the standard population used and has no intrinsic meaning. The age adjusted death rate for Utah shows that there has been a definite decrease in mortality. Figure 5 illustrates that from 1980 to 1990 there has been a steep decline in mortality and a more gradual decrease between 1990 and 2000.

Figure 5



**Summary:**

Analyses of historical data show a definite decrease in mortality rates for the state of Utah over the past 40 years. Rate calculations, whether crude, age-specific or age-adjusted, are used to measure the mortality of a population and make comparisons over time. Different analytical techniques can show the impact that public health programs have had on mortality. Death rates and cause of death analyses are available to help policy makers identify and develop health programs and can also be used as indicators to track the effectiveness of their policies.